

Amendments to the Claims:

1. (Currently Amended) A computer implemented method for optimizing a schedule of legs employed by at least one service provider in transporting objects between geographic markets, the method comprising the steps of:

- a) identifying a set of itineraries for serving each market in a set of markets, each itinerary comprising one or more legs;
- b) generating a set of market plans for each market of a plurality of markets, wherein the set of market plans for each market comprises a plurality of market plans with each market plan comprising a modified set of the itineraries for the market;
- c) individually determining the profitability of each market plan for each market following generation of new set of market plans for each of the plurality of markets; and
- d) selecting from the set of market plans for each market a subset optimizing overall profit of the schedule while accounting for resources of a service provider, wherein the subset of market plans is selected following a determination of the profitability of each market plan for each market.

2. (Original) The method of claim 1, wherein the generating step includes the substeps of:

- a) changing a status parameter of one of the itineraries in the set of itineraries while leaving the status parameters for the remaining itineraries unchanged; and
- b) repeating said changing step for each itinerary in the set.

3. (Original) The method of claim 1, wherein market plans are generated utilizing itineraries including at least one leg from a specified service provider.

4. (Original) The method of claim 1, wherein the determining step employs a profitability model.

5. (Original) The method of claim 1, wherein the selecting step employs a mixed integer program to select the subset of market plans to maximize overall profit of the schedule.

6. (Original) The method of claim 1; further including the step of evaluating a termination condition to determine whether additional market plans will be generated using the subset of market plans.

7. (Original) The method of claim 1, wherein the identifying step includes the substep of generating the set of itineraries based on at least scheduled legs and automatically-generated hypothetical legs of a specified service provider.

8. (Currently Amended) A system including one or more computers executing applications for optimizing a schedule of legs employed by at least one service provider in transporting objects between geographic markets, the system comprising:

- a) a component configured to identify a set of itineraries for serving each market in a set of markets, each itinerary comprising one or more legs;
- b) a component configured to generate a set of market plans for each market of a plurality of markets, wherein the set of market plans for each market comprises a plurality of market plans with each market plan comprising a modified set of the itineraries for the market;
- c) a profitability model configured to individually determine the profitability of each market plan for each market following generation of new set of market plans for each of the plurality of markets; and
- d) a mixed integer program configured to select from the set of market plans for each market a subset optimizing overall profit of the schedule while accounting for resources of a service provider, wherein the subset of market plans is selected following a determination of the profitability of each market plan for each market.

9. (Original) The system of claim 8, wherein the component configured to generate a set of market plans is further configured to:

- a) change a status parameter of one of the itineraries in the set of itineraries while leaving the status parameters for the remaining itineraries unchanged; and
- b) repeat said changing step for each itinerary in the set.

10. (Original) The system of claim 8, wherein market plans are generated utilizing itineraries including at least one leg from a specified service provider.

11. (Currently Amended) A computer program product having computer readable instructions embodied in a computer-readable medium for programming a computer to optimize a schedule of legs employed by at least one service provider in transporting objects between geographic markets, by performing the steps of:

- a) identifying a set of itineraries for serving each market in a set of markets, each itinerary comprising one or more legs;
- b) generating a set of market plans for each market of a plurality of markets, wherein the set of market plans for each market comprises a plurality of market plans with each market plan comprising a modified set of the itineraries for the market;
- c) individually determining the profitability of each market plan for each market following generation of new set of market plans for each of the plurality of markets; and
- d) selecting from the set of market plans for each market a subset optimizing overall profit of the schedule while accounting for resources of a service provider, wherein the subset of market places is selected following a determination of the profitability of each market plan for each market.

12. (Original) The computer program product of claim 11, wherein the generating step includes the substeps of:

- a) changing a status parameter of one of the itineraries in the set of itineraries while leaving the status parameters for the remaining itineraries unchanged; and
- b) repeating said changing step for each itinerary in the set.

13. (Original) The computer program product of claim 11, wherein market plans are generated utilizing itineraries including at least one leg from a specified service provider.

14. (Original) The computer program product of claim 11, wherein the determining step employs a profitability model.

15. (Original) The computer program product of claim 11, wherein the selecting step employs a mixed integer program to select the subset of market plans to maximize overall profit of the schedule.

16. (Original) The computer program product of claim 11, further including the step of evaluating a termination condition to determine whether additional market plans will be generated using the subset of market plans.

17. (Original) The computer program product of claim 11, wherein the identifying step includes the substep of generating the set of itineraries based on at least scheduled legs and automatically-generated hypothetical legs of a specified service provider.